UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

FEB 0 8 2013

Mr. William T. Walker
Chief, Regulatory Branch
U.S. Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510-1096

Re: PN: NAO-2010-00423/2012-01671 Berry Hill Mega Park, Danville, Virginia

Dear Mr. Walker:

The U.S. Environmental Protection Agency (EPA) has completed its review of the proposed Berry Hill Mega Park (Park) near Danville in Pittsylvania County, Virginia. EPA's review and comments provided herein are based on the Public Notice, and supplemental documentation including the joint permit application, the Compensatory Mitigation Plan (CMP) and associated attachments and maps. Pursuant to Paragraphs I.2 and IV 3(a) of the 1992 Clean Water Act (CWA) Section 404(q) Memorandum of Agreement between EPA and the Department of the Army (MOA), EPA is hereby notifying the U.S. Army Corps of Engineers (Corps) that in EPA's opinion, this project may result in substantial and unacceptable impacts to aquatic resources of national importance. Specific comments can be found in the enclosure to this letter.

Consistent with Paragraph I.2 of the MOA and our responsibilities and authorities pursuant to Sections 404(b)(1), 404(c), and 404(q) of the Clean Water Act, Section 309 of the Clean Air Act, and the National Environmental Policy Act, the comments provided herein, among other things, identify EPA's views regarding compliance with the Section 404(b)(1) Guidelines. The CWA Section 404(b)(1) Guidelines (Guidelines) (40 C.F.R. Part 230) provide the substantive environmental criteria against which the application must be considered. Fundamental to the Guidelines is the premise that no discharge of dredged or fill material may be permitted if: (1) it causes or contributes, after consideration of disposal site dilution and dispersion, to violations of any applicable state water quality standard; (2) a practicable alternative to the proposed discharge exists that would have a less adverse impact on the aquatic environment; or (3) the discharge would cause or contribute to significant degradation of waters of the United States (WOUS).

Based on the information available to EPA for review it is unclear whether the proposed project complies with the Guidelines. During our review EPA identified several areas of

concern. These include: the loss of valuable aquatic resources for a speculative enterprise which has no committed tenants; the proximity of another similarly proposed speculative project (Commonwealth Crossing); inadequate characterization of the resources that will be directly and indirectly impacted; an inadequately defined project purpose and need, which adversely affects our ability to fully analyze avoidance and minimization of impacts, and our ability to fully identify and consider practicable alternatives; lack of secondary and cumulative impacts analysis; and the proposed mitigation. The enclosure describes EPA's review in greater detail and provides specific comments and questions. Please be assured that EPA wishes to work with the Corps and the applicant to resolve our concerns.

Project Description

The Park is a proposed multiple phase mega site industrial development on approximately 3,500 acres of publicly-owned land near the North Carolina border. The City of Danville and Pittsylvania County are working jointly to develop the Park through the Dansville-Pittsylvania Regional Industrial Facility Authority (RIFA). To attract one or more future industrial clients, the applicant is proposing to construct the first phase of the Park. Phase 1 activities include impacts to WOUS on Lots 3, 4, 5, 11 and 12 which provide pre-development infrastructure, transportation and pad site improvements. As proposed, this phase of the project will permanently impact a total of 36,135 linear feet of stream channel (15,600 linear feet of ephemeral stream channel, 20,179 linear feet of intermittent stream channel, 356 linear feet of perennial stream channel) in addition to 20.38 acres of wetlands (15.89 acres of forested wetlands, 2.47 acres of scrub shrub wetlands, and 2.02 acres of emergent wetlands) and 0.69 acres of open water.

The applicant proposes to compensate for permanent stream channel impacts with permittee-responsible compensation. Wetland compensation is proposed at a ratio 2:1 for forested wetlands, at 1.5:1 ratio for shrub-scrub wetlands, and 1:1 ratio for emergent wetlands and open water. Based on the Unified Stream Methodology (USM), the proposed compensation will result in 35,300 USM credits. The compensation proposed by the applicant will include: onsite enhancement of 3,534 linear feet of stream channel, onsite preservation of 58,826 linear feet of stream channel, creation of 2.15 acres of onsite rain gardens, creation of 37.69 acres of wetlands, and credits for a previous dam removal (Brantley Dam) and a proposed dam removal (White Mill Dam) on the Dan River.

The impacts are within important headwater stream and wetland systems of Trotters Creek, McGuff Creek and an unnamed tributary to the Dan River. The Dan River drains into the Roanoke River. Both are interstate waters and all these waters are tributaries to the Albemarle Sound. The Albemarle-Pamlico Sound is the second largest estuary in the United States and the Roanoke River drainage provides over half of the fresh water to the Albemarle Sound.

Speculative Nature of the Proposed Development

Revitalization of tobacco-dependent communities is a focus for both the Commonwealth of Virginia and the affected communities. The RIFA has developed Cyber Park and Cane Creek Centre and is now proposing Berry Hill Mega Park to attract industrial users that will help to

transform the regional economy. The applicant is proposing a project which is speculative in nature. Without any sense of committed or even potential tenants and their needs, it is extremely difficult to identify potential alternatives or to determine whether the proposed configuration represents the least damaging practicable alternative. Of even greater concern, there is a potential for valuable aquatic resources to be impacted and/or impacted to a greater extent than necessary.

EPA's concern is further heightened because of Commonwealth Crossing, a similarly proposed project located 15 miles away, and other sites in the region which are targeted for industrial development. EPA is unaware that tenants have been identified for Commonwealth Crossing or other potential sites; accordingly, these sites collectively compete for area resources and collectively would impact WOUS in the Dan River watershed. In addition to development, water resources in the Dan River are threatened by agriculture and timbering. Future potential stressors to the watershed include hydraulic fracturing, a proposed landfill, and uranium mining.

Resource Characterization

The environmental information provided in the joint permit application (JPA) lacks a full resource characterization of the onsite resources proposed to be impacted. Without detailed information, beyond the USM forms, it is difficult to know the quality of the resources proposed to be filled, which in turn complicates assessment under the Section 404(b)(1) Guidelines. None of the three streams draining the project parcel are listed for impairment on the CWA Section 303(d) list. While it may be reasonable to assume that the site is in relatively good condition based on the information provided, a portion of the site has been logged within the last five years. To fully understand the potential impacts of the proposal, as well as assuring full and appropriate compensation for those impacts, baseline chemical, biological and physical habitat data should be provided.

Filling of streams and wetlands will likely lead to changes in the biogeochemical and hydrologic conditions of the receiving streams. The headwater streams are vital components of the ecosystem. Ephemeral and intermittent streams collectively provide high levels of water quality and quantity, natural flood control, sediment control, nutrients, and organic matter, and as a result, are largely responsible for maintaining the quality of downstream riverine systems such as the Roanoke River and the Albemarle Sound. Even though ephemeral-intermittent and intermittent streams may go dry during a portion of the year, they continue to support biodiversity by providing habitat for macroinvertebrates and amphibians that utilize the saturated interstitial areas beneath the streambed known as the hyporheic zone. In addition, the ephemeral portions of headwater streams collect organic matter from the surrounding area via stormwater runoff and convey this material to be processed downstream. Baseline data should be obtained to inform the current conditions and functions of the aquatic resources within in the project site and their contributions to the downstream stream network.

Project Purpose and Need, Alternatives, and Avoidance and Minimization

The project purpose and need is fundamental to review of the project under the Section 404(b)(1) Guidelines (*see, e.g.,* 40 C.F.R. § 230.10(a)), as well as the Corps' public interest

review (*see* 33 C.F.R. § 320.4). Among other things, the range of alternatives to be evaluated under the Section 404(b)(1) Guidelines is defined by the purpose and need for the project. Presentation of the project purpose and need informs consideration of whether the project is water dependent and whether all appropriate and practical steps to avoid and minimize the discharge have occurred (*see* 40 C.F.R. § 230.70; *id.* § 230.91(c)). The purpose and need statement should identify and describe the underlying problem (need) and the actions that will address the need. The scope of project purpose cannot be so limiting that all other alternatives are eliminated. A full range of practicable alternatives which meet the applicant's needs should be thoroughly considered.

In this case the applicant proposes to fill waters of the U.S. for the "purpose of providing pre-development infrastructure, transportation, and pad site improvements of a size necessary to attract and industrial use capable of providing a transformational, substantial positive economic impact to the Danville/Pittsylvania County area." EPA understands that Danville and Pittsylvania County have high unemployment and wishes to support efforts to attract business. The information provided, however, does not document that the proposed project represents the least damaging practicable alternative for achieving that project purpose or that a full range of alternatives have been considered, including potentially less environmentally damaging alternatives such as use of privately-owned lands, or opting for campus style industrial parks with flexible size and configuration given the topography of the region. To make this a more compelling case for the Mega Park, empirical data to support the premise that a Mega Park constructed on this publically-owned land will address the applicant's need relative to other potential alternatives should be provided. Moreover, as noted above, no future users of the site have been identified. Without any description of potential or actual end-users there is a risk that construction of the Mega Park will result in more impact than ultimately is necessary to achieve the project purpose.

The 404(b)(1) Guidelines restrict discharges when there is a practicable alternative that would have less adverse impact on the aquatic ecosystem. Ultimately, the permit issued by the Corps should reflect the least damaging practicable alternative (LEDPA). 40 C.F.R. § 230.10(a). At this stage it is unclear how the LEDPA can be identified without knowing an identified end user's needs. To identify the LEDPA, the range of practicable alternatives must be considered. The range of alternatives should include not only geographical siting of the project, but also functional alternatives such as design modifications that avoid or further minimize impacts; even the no action alternative. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology and logistics, in light of overall project purposes. 40 C.F.R. § 230.3(q). The applicant should be aware that neither increased costs of an alternative nor an unwillingness to pursue an alternative necessarily renders that alternative impracticable.

Alternatives should not be limited to publicly owned property (see 40 C.F.R. § 230.10(a)(2)), and include whether the purchase of privately held property could be reasonably obtained and become publically owned. Particularly given the breadth of the project purpose, the burden should be on the applicant to demonstrate that there are no practicable alternatives (including on-site reconfiguration to avoid impacts and off-site alternatives) that would have no

or fewer impacts to WOUS and why a project configuration that avoids all impacts to aquatic resources is not the LEDPA.

Secondary, Cumulative Impacts and Additional Study

The Section 404(b)(1) Guidelines direct consideration of cumulative and secondary impacts. Cumulative impacts are defined as "the changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems." 40 C.F.R. § 230.11(g)(1); *see also id.* §§ 230.1, 230.11 and 230.12. Information provided indicates that the Berry Hill Mega Park proposal will be constructed in two phases; this application is for phase one. The second phase of development associated with the Park and the potential direct, secondary and cumulative impacts resulting to the receiving aquatic system need to be thoroughly considered and addressed. The Park is entirely located within the Cascade Creek Watershed and comprises about 12.5 percent of the land area of the Trotters Creek sub-watershed. Consideration should be made regarding the effects this may have on the aquatic ecosystem on-site and downstream.

In addition to the potential direct effects of the proposed project, EPA is concerned with the potential secondary effects to the aquatic ecosystem that may result. It is presumed that infrastructure upgrades by the county would be necessary for servicing the site. In addition to this proposed project, other development projects in the county as well as other potential future Virginia Economic Development Partnership and Tobacco Indemnity Fund development sites within the same geographic area may require addressing infrastructure needs such as rail, roads, sewerage, and water. Also, secondary housing and commercial developments may result from the future development of this site and others. These secondary effects need to be identified along with any resultant potential impacts and included in the evaluation and analysis of the proposed development of the Berry Hill Mega Park project.

To evaluate potential cumulative impacts to the aquatic ecosystem, other projects either associated with or not related to the Park, from the past, present and reasonably foreseeable future, impacting the same aquatic systems, should be identified. Assessment of these activities in the watershed should evaluate whether the combined effects of activities may result in significant degradation of aquatic resources.

To thoroughly investigate the issues of potential secondary and cumulative impacts of this proposed Mega Park project and other Virginia Economic Development Partnership and or Tobacco Indemnity Fund sites, EPA recommends considering the use and development of a Programmatic or Tiered Environmental Impact Statement (EIS). Such an approach may have significant benefits to the applicant and the Corps, as it could facilitate consideration of future proposals, assist in avoiding environmentally sensitive areas, and inform the numerous projects which are before the Corps at this time. This approach could assist in identifying any significant potential environmental impacts or public controversy from this and future proposals.

An EIS or Environmental Assessment (EA) done in accordance with the National Environmental Policy Act (NEPA) assists the Federal agencies in assessing impacts of projects and aids in decision-making. A programmatic study is a type of tiering. Tiered studies are described in the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 C.F.R. Part 1502.20 and 1508.28). Tiering according to CEQ regulation is appropriate when a study needs to be done on an "action at an early stage (such as need and site selection)"; it is "encouraged to… eliminate repetitive discussions of the same issues and focus on the actual issues ripe for decision at each level of environmental review." This study would allow a comprehensive look at purpose and need, and alternatives to meet the need for attracting industry to areas of Virginia. A Programmatic EIS would be effective to scope and aggregate issues that are important to the decision-maker, including properties that are available, the alternatives' ability to meet the purpose and need, and critical environmental resources that need to be identified early in a screening process. This document would give an overview of the activities for attracting businesses and promoting economic growth, comparison of a range of alternatives, assist in analysis of direct, secondary and cumulative impacts, would conclude with a path forward in the permitting process and to further assess selected sites for a site-specific analysis, without duplication of analyses. This would be a way to assure equal and fair assessment and review of all project areas being considered for development by Virginia and for selection of alternatives which would meet purpose and need.

Mitigation

Impacts to the aquatic ecosystem must be first avoided and then minimized. Once the applicant has taken all appropriate and practicable steps to avoid and minimize adverse impacts, then compensatory mitigation can be considered for the unavoidable impacts. As stated above, it is our view that there is the potential for additional avoidance of impacts. The applicant's proposed compensatory mitigation plan includes permittee-responsible onsite enhancement and preservation of stream channels, creation of onsite rain gardens, onsite wetland creation, and removal of two low-head dams on the Dan River. To ensure that aquatic resource functions are adequately replaced, EPA recommends that a thorough assessment of the current condition of proposed impacted waters be made using appropriate and acceptable assessment methodologies to sufficiently identify the functional replacement needs of the streams and wetlands onsite. In accordance with the final mitigation rule, permittee-responsible mitigation may be considered for the LEDPA and only where it is practicable and likely to be ecologically successful and sustainable. Achieving successful, sustainable compensation is highly dependent on the type of resource, location and significance in the watershed, and qualifications of the personnel involved.

The fundamental objective of compensatory mitigation is to offset environmental losses from unavoidable impacts to WOUS authorized by Department of the Army permits. EPA does not find that the proposed compensatory mitigation plan meets this objective. For example, rain gardens which are a stormwater management tool do not compensate for the lost functions and services of ephemeral streams and headwater systems. Also, EPA would not support approving credits for a dam that has already been removed. While dam removal may afford benefits such as fish passage and may be considered for mitigation credits, it is done so within the regulatory

framework established in the final rule. The amount of mitigation is also an issue because not all impacts were identified and included in the total amounts. For example, there are additional indirect impacts resulting from grading activities that should be included as requiring compensation.

Part of the proposed mitigation plan involves preservation and enhancement of stream channels on-site. While the Final 2008 Mitigation Rule contemplates the use of preservation as a form of compensation, the rule also indicates that the resource to be preserved should contribute significantly to the ecological sustainability of the watershed, that important physical, chemical, and biological functions in the watershed are being preserved, and that the resource is under threat of destruction or adverse modifications. 40 C.F.R. § 230.93(h). EPA has concerns with the proposal because of the potential for stormwater runoff and increased sediment to enter the stream systems due to extensive clearing and grading during construction of Phases I and II which will likely adversely affect the channels proposed for preservation. Also, current and future offsite development higher up in the watershed could affect the sustainability of the compensation onsite. As stated earlier, a significant portion of the region is targeted for current and future development which raises concerns about sustainability. Unless impacts to aquatic resources are significantly reduced, this watershed will likely be adversely affected with impacts to water quality, habitat, and water quantity. In light of the Berry Hill development, the proposed current and future development within the Trotters Creek sub-watershed and the likelihood for adverse modifications as a result, it is unclear whether the proposed preservation meets the Mitigation Rule criteria.

Conclusion

EPA believes that the project as currently proposed may not comply with the Section 404(b)(1) Guidelines, that the project may adversely affect water quality and result in significant degradation to the aquatic ecosystem, and that modifications to the proposed project and the permit application need to be considered to address such impacts. EPA believes that there may be less damaging onsite or offsite alternatives and that the lack of information regarding the needs of future tenants impairs any analysis regarding potentially less environmentally practicable alternatives. The discharge of fill material in the headwater streams and wetlands may have significant adverse effects, which in turn may have an adverse effect on the Dan River watershed and may result in significant degradation of waters of the United States.

The proposed discharge of pollutants may have an adverse effect on the aquatic ecosystem diversity, productivity, and stability through the loss of benthic and wildlife habitat, and loss of a wetland's capacity to assimilate nutrients or purify water. The impacts to vital watershed functions and potential resultant impacts to downstream receiving waters, including the Roanoke River and Albemarle-Pamlico Sound, need to be considered and thoroughly assessed. In light of these concerns, EPA believes that the project may result in unacceptable and adverse impacts to aquatic resources of national importance as defined in Part IV, paragraphs 1 and 3(a), of the 1992 Clean Water Act Section 404(q) Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army.

To better facilitate review of this project and related potential future projects, we believe it may be appropriate for the Corps to prepare a Programmatic or Tiered EIS. As you make your determination of whether to prepare an EIS, we recommend that you consider the complexity of the issues associated with the development of this project and other proposals in the same geographic area. These issues include the additional development locations within the County and the other additional future Indemnity Fund development sites; the potential impacts to downstream interstate waters which may require additional coordination with other state and federal agencies; the potential secondary and cumulative impacts that may result from the permitting of the proposed project; and the direct impacts to and resultant loss of vital headwater streams. In addition, it is not clear that the mitigation proposal, as currently drafted, would serve as a basis for supporting a Finding of No Significant Impact. We would appreciate the opportunity to discuss with you this issue of whether an EIS should be prepared, as well as our other concerns with the permit application.

We would like to make clear that EPA understands the applicant's desire to attract business, promote the local economy and to improve the economic condition of the area and the people who live there. We stand ready to work with you and the applicant on these issues and identify an appropriate path forward that meets the goals and objectives of the applicant, while ensuring protection of environmental resources.

Thank you for the opportunity to provide comments. If you have any questions please do not hesitate to contact Ms. Carol Petrow, staff contact, at 215-814-2789 or by email at petrow.carol@epa.gov

Sincerely,

John R. Pomponio, Director
Environmental Assessment and Innovation Division

Enclosure:

Enclosure: EPA Comments for NAO-2010-00423/2012-01671 Berry Hill Mega Park

EPA is providing the following comments of a general nature in response to the public notice. It is our belief that the proposed project fails to meet the fundamental premise of the 404 (b)(1) Guidelines. Without having final tenant(s) committed to building on this site, EPA cannot determine that the project, as proposed, is the least environmentally damaging practicable alternative.

Purpose and Need

In light of all the proposed and existing industrial development projects within this Region of Virginia as well as throughout the Commonwealth, i.e., Commonwealth Crossing and the Turner Tract, additional information which supports the basic project purpose of the Berry Hill Mega Park is needed. Any and all documentation from tenants committed to building on this site should be provided.

RIFA is seeking McCallum Sweeney's megasite certification for the Berry Hill Mega Park. In the analysis of possible offsite alternatives, the applicant's search only included locations with rail access and availability of water, sewer and natural gas which are factors considered for certification. Initially, four alternatives were identified, but all were dropped because they did not meet one or more of the minimum criteria for megasite certification. This raises the question about basic and overall project purpose and need. Basic and overall project purpose and need must be clarified. Is it to bring jobs and economic stability into the region or have a certified megasite? Please explain how these objectives differ and discuss the overall and basic project purpose in detail. Please provide a copy of the Berry Hill Mega Park Master Plan. What is the status of the Mega Park certification? Please provide a detailed update including outstanding issues.

Please explain rezoning the parcel to heavy industrial and how that decision affects site design.

The applicant should provide a list of the types of industries that would be suitable tenants and their requirements and criteria.

Please provide a full-size project plan that clearly shows all jurisdictional aquatic resources on the proposed site and clearly identifies those proposed to be impacted. Distinctive colors and patterns should be used for different types of resources and impacts. The Lots should be overlaid. Please clearly identify the entire parcel; proposed Phase 1 and Phase 2 Lots. On the drawings of each Lot show the limit of disturbance in a contrasting color. Every drawing should include a legend identifying all pertinent features on the drawing.

Please identify and summarize all temporary impacts to waters of the U.S.

Alternatives

The analysis of alternatives should be proportional to the magnitude, complexity and type and amount of impacts. This proposed megasite project is significant in all respects. The alternatives analysis only considered publically-owned land. The applicant should justify the need for this project and provide additional information about the offsite analysis. The alternatives analysis should be expanded to all upland sites publically and privately owned, leased, or optioned within a reasonable geographic service area since the beginning of the planning process. Provide both the geographic scope of the analysis and the criteria used to evaluate the alternatives. Please explain how the geographic scope was determined. All supporting documentation should be provided.

The Danville-Pittsylvania County Economic Development Corporation website and other entities list additional potential sites for industrial development. These appear to be viable current alternatives that should be analyzed for suitability to meet the project's purpose and need and to avoid and minimize environmental impacts particularly with respect to waters of the U.S. There may be a tenant or a combination of tenants that individually or collectively require a smaller footprint or have different requirements that afford more flexibility in site design while still providing as many regional employment opportunities and income. The information included in the JPA should be expanded. A list of potential tenants that may meet these criteria should be provided citing examples. For the types of typical tenants being targeted, general space requirements, building layouts, infrastructure needs and attendant features should be provided.

EPA is aware of at least six other sites similar to this proposal that are being funded by the VA Tobacco Indemnity Fund. Presumably, all of the sites will be competing for the same industrial users. EPA supports the use of a fully vetted alternatives analysis that would examine the potential impacts for each of the sites compared to each other. EPA suggests these Tobacco Indemnity Fund sponsored projects be thoroughly analyzed through a Programmatic or Tiered EIS.

The applicant should evaluate onsite alternatives that reduce the overall development footprint by reducing the number of Lots. Include a discussion of practicability for each alternative presented.

As proposed, construction involves massive site clearing and grading. Please provide information explaining the need for each proposed area to be cleared and graded as well as the size of each area proposed for development. Evaluate alternatives to this approach that reduce the amount of disturbed area.

Consider an approach to development that uses sustainable site design principles and practices and development techniques that are energy-efficient, use green technologies and are protective of the waters of the U.S. Less clearing and grading could mean less impacts plus more desirable aesthetics. The City of Danville's Comprehensive Plan for 2020 identifies Environmental Conservation as one of eight categories for which the City has established goals. The primary goals are to enhance, protect and preserve Danville's valuable environmental resources through the establishment of environmental guidelines

while promoting a greater awareness of environmental beauty and other positive physical attributes of the City. A few other key goals in the Plan are: stress a smart growth design ethic; protect and preserve the City's rich heritage; strengthen site plan controls; promote greater accountability within the private sector; and promote opportunities with an emphasis on quality site planning. The County and City have an unprecedented opportunity to be a model for development in the region. All of the goals applied collectively or individually to site design for the proposed project would likely result in reduced impacts to environmental resources including waters of the U.S.

It has been suggested that having megasite certification will bring large heavy manufacturing industries to the region. Given the general downturn in the economy is there a demand for megasites? Please provide supporting documentation.

Given that the real estate market in most parts of the country has declined, some industries have failed or downsized and properties are likely vacant. Additional sites suitable for an industrial pad should be identified within the service area. The joint permit application (JPA) states that jobs have been lost because of the loss of historically important industries in the area such as the furniture, textile, and tobacco. Are there abandoned sites available that could be reused instead of previously undisturbed areas? Please provide a list of properties in the region and a comparison with other alternatives considered, including the preferred alternative.

Avoidance and minimization

This project will impact significant length of stream channel and wetland acreage. The majority of the tributaries to Trotter Creek, McGuff Creek and the unnamed tributary on the site will be impacted. Many of these are headwater streams. The receiving water is the Dan River which in the areas where these tributaries join has been recommended for listing as a Virginia Scenic River. Because of the extensive impacts to these tributaries, additional impacts from future phases of development, other development in the watershed, the amount of clearing and grading and impervious surface, and the lack of a comprehensive site-wide stormwater management plan, EPA believes the proposed project will cause or contribute to significant degradation of important aquatic resources. These impacts will not be mitigated through measures such as the proposed 200-foot buffers because of the extensive scope of disturbance from construction of the Park and other current and future development in the watershed. The applicant should prepare a detailed watershed analysis that evaluates current and future development.

Depending on future tenants' needs and resultant layout of their facilities, portions of pads may be underutilized or unutilized. For example, if multiple industrial users are located in Phase 1 pad sites but the configuration of the facilities does not fill the pad may result in unnecessary fill being placed with the site.

EPA suggests the applicant first identify and then work with interested industrial users to design an exact pad layout design that will meet their requirements and at the same time avoid and minimize impacts to jurisdictional waters. EPA believes that following this approach is essential to determine the LEDPA.

In addition to the extensive clearing and grading, EPA is concerned with the increase in impervious surface, the lack of a site-wide comprehensive stormwater management plan, and the loss of a significant amount of headwaters to Trotters and McGuff Creeks.

Please discuss using directional drilling instead of trenching for utility crossings. Provide a drawing that shows utility crossings, rail and road crossings of streams and wetlands. Please summarize the number of stream crossings on each stream reach.

EPA encourages the incorporation of low impact development (LID) methodologies into development plans to reduce impacts to aquatic resources. LID practices and design strategies attempt to minimize impervious cover, conserve natural cover, and to replicate the pre-development conditions. These goals may be achieved through the use of such options as permeable surfaces for parking areas, residential lot setbacks, minimizing roadway widths, narrower sidewalks, selective clearing, flattening grades, disconnecting impervious surfaces, infiltration practices, amended soils, vegetated swales, and maintaining natural runoff patterns. Please describe if LID was incorporated in the plans for development and how they are intended to minimize impacts.

Secondary/cumulative impacts

A full accounting of the potential jurisdictional impacts of Phase II should be discussed and evaluated in consideration of Phase 1.

A discussion of any anticipated secondary road impacts should be provided. Other than the connector road that VDOT is constructing, are upgrades to other roads anticipated?

How does the county anticipate handling increased usage of roads by employees and heavy truck traffic? Will intersections need to be upgraded and will there be further impact to jurisdictional features in the county and watershed?

What is the expected impact on the local water supply system once the industrial user is added to the system? Will the Public Service Authority supply large scale water to the pad? If so, what is the source of the water supply for the county and how will that water body be affected? Will electrical or gas lines need to be expanded to service the area?

Additionally, is the population expected to grow in the county if the demand of additional labor draws new workers to the area for these industrial jobs? If so, please provide an analysis of the potential impacts on the infrastructure, such as upgrades to roads, additional supporting development, and environmental impacts.

The Berry Hill Mega Park parcel comprises approximately 12.5% of the land area of the Trotters Creek subwatershed. In a subwatershed context, what percent of streams and wetlands will be impacted from Phase 1 and after full build out of Phase 2? What affect will the other phases have on this site and receiving waters when compared to other available industrial sites in the county and subwatershed?

Please provide the web soil survey for the entire parcel.

Please provide documentation of logging activities that have occurred on the entire site. Show the areas affected and when the logging was performed. Is timbering an ongoing activity? Does RIFA have a forest management plan?

EPA suggests that the analysis of secondary and cumulative impacts consider the already identified offsite alternatives. EPA also suggests the other Tobacco Indemnity Fund-sponsored projects be thoroughly investigated for potential secondary and cumulative impacts in their respective counties and watersheds.

Property for Berry Hill was reportedly acquired in several parcels. Please provide history of both the Park and the land acquisitions for it.

Mitigation

As stated in the cover letter, EPA has concerns about the proposed compensatory mitigation and its compliance with the 2008 Compensatory Mitigation Rule. The Mitigation Rule requires permittee-responsible mitigation be determined using the principles of a watershed approach. We question the sustainability and value of the proposed onsite preservation and enhancement. We do not have sufficient information at this time to make a determination on the adequacy of the every aspect of compensation proposed, but have identified some specific deficiencies.

It appears the majority of the onsite preservation will receive runoff from the proposed pads. The receiving streams will have altered hydrologic flow patterns once the pads are complete. Please provide a discussion of the expected changes from development in streams, wetlands and the surrounding flood plain and riparian zone. Given the nature and extent of clearing and grading, the long-term viability of onsite preservation as mitigation is questionable. A comprehensive, long-term monitoring program is necessary to evaluate the potential impacts from development may have on the resources which have been avoided. The applicant states that the onsite mitigation will maintain important physical, chemical and biological function for the watershed. Please explain how this will be demonstrated.

The applicant should provide a thorough assessment of the current onsite conditions of aquatic resources to identify the functional replacement needs of the streams and wetlands on site and to track the impact of development on these resources. Monitoring should be initiated in a timely manner to document pre-construction conditions and be continued a minimum of 10-years after full build-out. Monitoring requirements should include data on the chemical, physical and biological parameters. The monitoring requirements for stream preservation for mitigation banks in Virginia should be used as a template.

Part of the proposed stream compensation includes the creation of a bankful bench on Trotters Creek and layback bank construction on McGuff Creek. Please clarify why these activities are being proposed.

Some impacts to waters of the U.S. may not be included as impacts. For example, the proposed extensive grading of Lot 3 to meet criteria for mega park certification results in isolating numerous upstream headwater streams that currently flow across the site. All direct and indirect impacts should be included and evaluated.

While preservation can be considered for mitigation, the 2008 Final Compensation Mitigation Rule outlines specific criteria that must be met for preservation to be used for compensation. Some of the criteria include the following: utilizing the watershed approach the resources to be preserved provide important physical, chemical, and biological functions in the watershed. The resources to be preserved contribute significantly to the ecological sustainability of the watershed. The resources are under threat of destruction or adverse modifications. While the USM forms were provided for the proposed mitigation areas, supporting documentation of the needed criteria was not provided in the submitted JPA. EPA requests the applicant provide this analysis.

We do not agree with giving mitigation credit for rain gardens which are for stormwater management or crediting the removal of the Brantley Dam which was removed in 2011. With regard to the proposed removal of the White Mill Dam, the applicant must demonstrate the benefits of the proposed removal to the watershed. In fact, a watershed approach should be used to establish appropriate compensation. Looking at aerials indicates that there are other opportunities in the watershed that may provide a more direct measurable benefit to the watershed. EPA suggests the applicant consider enhancement and restoration on streams within the watershed that will improve the physical, chemical, and biological characteristics of the streams. Using a watershed approach, please expand the search for mitigation opportunities. Identify and evaluate other options including existing banks.

Please provide the qualifications for the individuals designing and constructing wetlands and vernal pools. Detailed examples of similar projects constructed should be provided.

The wetland functional assessment is not adequate. A more rigorous scientific approach should be applied.

We request an opportunity to review and comment on the mitigation plan as it is developed.

Water quality

There was very limited data provided concerning the water quality of either the impacted streams or the downstream receiving streams. Please provide a detailed discussion of existing conditions, impairments, threats and other pertinent information about the aquatic resources in the watershed. Please discuss the expected changes to hydrologic flow and anticipated adverse effects that may be expected to receiving waters including physical, chemical, and biological effects. How will the proposed project at full build-out potentially affect the reservoir and its recreational use? If models are used, please describe.

The applicant is proposing to extensively modify the amount of impervious surface on a substantial portion of a 3,500 acre site. Please include a fully vetted analysis of the changes to the biogeochemical and hydrologic conditions of the subwatershed. This includes, but is not limited to, location of stormwater outflows, volume of respective discharges, expected flow regimes of the impacted streams from the pad footprint to confluence with the main channel, and stormwater best management practices.

Provide a comprehensive site-wide stormwater management plan.

The filling of the streams and wetlands will likely lead to changes in the biogeochemical and hydrologic conditions of the receiving streams. Please discuss how this proposed project will affect biogeochemical and hydrologic flows.

Ephemeral and intermittent streams collectively provide high levels of water quality and quantity, sediment control, nutrients, and organic matter, and as a result, are largely responsible for maintaining the quality of downstream riverine systems. Please discuss how this proposed project will affect downstream waters by the loss of these functions.

Even though ephemeral and intermittent streams may go dry during a portion of the year, they continue to provide habitat for macroinvertebrates and amphibians that utilize the interstitial water flows in the substrate below the stream. Please discuss how this proposed project may impact on-site and downstream waters by the loss of these functions.